

What is claimed is:

1. In association with a computer system, a method for simultaneously editing a spreadsheet stored in a disk file of a computer, said disk file including a disk image of said spreadsheet and a disk change log for maintaining a list of changes to said spreadsheet stored in the disk file, comprising the steps of:

- (a) allowing a first user using a first computer to access and edit said spreadsheet to create a first memory image of said spreadsheet;
- (b) storing said first user's changes in a first memory change log;
- (c) in response to performing a save operation, copying said first memory change log to said disk change log stored in said disk file;
- (d) allowing second user using a second computer to access and edit said spreadsheet simultaneously with said first user to create a second memory image of said spreadsheet;
- (e) storing said second user's changes in a second memory change log; and
- (f) in response to performing a save operation, identifying whether any intervening changes from said first user exist in said disk file, merging the changes in said second memory change log with said intervening changes, and coping said second memory change log to said disk change log.

2. The method of claim 1 wherein said step of merging comprises:

determining whether any conflicting changes exist between the changes in said second memory change log and said intervening changes of said first user;

resolving all conflicting changes by identifying and eliminating a losing change for each said conflicting change.

3. The method of claim 2 wherein said step of determining whether any conflicting changes exist comprises:

copying the portion of said disk change log containing said first user's changes to the memory of said second computer;

reference adjusting each change in said second memory change log according to each change in said disk change log;

reference adjusting each change in said disk change log according to each change in said second memory change log; and

determining whether any two changes in said second memory change log and said disk change log cannot exist simultaneously.

4. The method of claim 2 wherein said step of resolving comprises displaying a dialog box on a display screen of said second computer identifying the conflicting changes and allowing said second user to select the losing change.

5. The method of claim 2 wherein said step of resolving comprises said second computer automatically selecting the change that occurred first in time as the losing change.

6. The method of claim 2 wherein if said losing change is located in said second memory change log:

generating an inverse change associated with the losing change;

applying said inverse change to said second memory image; and

removing said losing change from said second memory change log.

7. Then method of claim 6 further comprising overwriting said disk image with said second memory image.

8. The method of claim 2 wherein if said losing change is located in said disk change log:

generating an inverse change associated with said losing change; and

storing said inverse change in a disk undo log.

9. The method of claim 8 further comprising copying said disk undo log to said disk file.

10. A computer system, including a program module for allowing simultaneous editing of a spreadsheet stored in a disk file that is accessible by a first computer through a first network connection and a second computer through a second network connection, said disk file including a disk image of said spreadsheet and a disk change log for maintaining a list of changes to said spreadsheet stored in the disk file, said first computer being operative to:

(a) allow a first user using said first computer to access and edit said spreadsheet over said first network connection to create a first memory image of said spreadsheet and to equate a first session identifier to a current session identifier;

(b) store said first user's changes in a first memory change log;

(c) in response to said first user performing a save operation, copy over said first network connection, said first memory change log to said disk change log stored in said disk file and update said current session identifier; and

said second computer being operative to:

(d) allow a second user using said second computer to access and edit said spreadsheet over said second network connection, simultaneously with said first user to create a second memory image of said spreadsheet and to equate a second session identifier to said current session identifier;

(e) store said second user's changes in a second memory change log;

(f) in response to said second user performing a save operation, identify over said second network connection whether any intervening changes from said first user exist in said disk file by comparing said second session identifier to said current session identifier;

(g) if any intervening changes exist, merge the changes in said second memory change log with said intervening changes;

(h) copy over said second network connection, said second memory change log to said disk change log; and

(i) update said current session identifier.

11. The system of claim 10 wherein the existence of an intervening change is determined by determining whether said first user has performed a save operation since said second user accessed said spreadsheet.

12. The system of claim 10 wherein said second computer is operative to merge the changes by:

determining whether any conflicting changes exist between the changes in said second memory change log and said intervening changes of said first user; and

resolving all conflicting changes by identifying a losing change for each said conflicting change.

13. The system of claim 12 wherein said second computer is operative to determine whether any conflicting changes exist by:

copying the portion of said disk change log containing said first user's changes to the memory of said second computer;